

IN THE CLAIMS

Claims 1-21 (canceled).

22. (new) An object tracking method for detecting and tracking an object in a picked-up image based on an image signal acquired by an imaging unit, comprising the steps of:

a) producing a template image of a predetermined size including a part of said object from an image acquired from said imaging unit;

b) conducting a template matching between a present image from said imaging unit and said template image, and detecting a position of a part of said present image matched with said template image as a current template image;

c) detecting an image changing area between at least two frames of images picked up at different time points by said imaging unit; and

d) detecting a position of said object based on said detected image changing area and setting the detected position of said object as a new template image in place of said current template image.

23. (new) An object tracking method according to claim 22, wherein said step d) includes a substep of detecting, based on said detected image changing area, an area having a greatest difference or a difference equal to or larger than a predetermined value between the said two frames as said position of said object.

24. (new) An object tracking method according to claim 22, wherein

said step d) includes a substep of setting a search area for detecting the position of said object based on the position of said current template image, and detecting an area having a greatest difference or a difference equal to or larger than a predetermined value between the said two frames as said position of said object in said set search area.

25. (new) An object tracking method according to claim 24, wherein said step d) includes a substep of enlarging or moving said set search range stepwise.

26. (new) An object tracking apparatus for detecting and tracking an object in a picked-up image based on an image signal acquired by an imaging unit, comprising:

an image input unit which converts video signals acquired by said imaging unit sequentially into image signals; and

a processing unit which processes the image signals converted by said image input unit, in a predetermined sequence,

wherein said processing unit produces a template image of a predetermined size including a part of said object from an image acquired from said imaging unit;

conducts a template matching between a present image from said imaging unit and said template image, and detects a position of a part of said present image matched with said template image as a current template image;

detects an image changing area between at least two frames of images picked up at different time points by said imaging unit; and

detects a position of said object based on said detected image changing area and sets the detected position of said object as a new template image in place of said current template image.

27. (new) An object tracking apparatus according to claim 26, wherein said processing unit sets a search area for detecting the position of said object based on the position of said current template image, and detects an area having a greatest difference or a difference equal to or larger than a predetermined value between the said two frames as said position of said object in said set search area.

28. (new) An object tracking apparatus according to claim 26, wherein said processing unit sets a search area for detecting the position of said object based on the position of said current template image, and detects an area having a greatest difference or a difference equal to or larger than a predetermined value between the said two frames as said position of said object in said set search area.

29. (new) An object tracking apparatus according to claim 28, wherein said processing unit enlarges or moves said set search range stepwise.